UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,091	12/21/2000	Jeffrey L. Kodosky	5150-45900	1583

35690	7590	11/18/2004

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.
P.O. BOX 398
AUSTIN, TX 78767-0398

EXAMINER
KANG, INSUN

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/747,091	KODOSKY ET AL.
	Examiner	Art Unit	..
	Insun Kang	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _8/23/2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,3-8 and 12-35_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1, 3-8, and 12-35_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   . a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _8/23/2004_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment and RCE filed 8/23/2004.

2.   As per applicant's request, claims 1, 3-7, 23, 25, 26, and 29 have been

amended, claims 2 and 9-11 have been cancelled, and claims 32-35 have been added.

Claims 1, 3-8, and 12-35 are pending in the application.

Specification

3.   The specification is objected to because: In page 1 line 3, page 17 line 9, and page

49 line 9, the application number 09/745023 of "System and method for

Programmatically... Program Information" is missing.   The verb "may" used throughout

the specification is not specific and clear enough concerning the invention's function. It

is unclear whether the invention performs the described functionality or not. It should be

stated in a more definitive manner. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 1, 3-8, and 12-35 are rejected under 35 U.S.C. 112, second paragraph,

as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

Per claims 1, 23, 25, 26, 29, and 32:

- it is unclear whether this graphical program is a placeholder/framework or a

complete graphical program as the specification does not precisely describe how to

generate a complete graphical program and the applicant states that a "state diagram

may not explicitly specify the program instructions or functionality to be performed when

each state is active, and thus it may not be possible to generate a complete graphical

program implementing the functionality represented by the state diagram (page 8 in the

background section of the instant application)."

-Also, the term "programmtically" is unclear whether it refers "automatically,"

programmatically," or "dynamically" as the applicant appears to assert that

"programmatically" means "automatically" or "dynamically" in the specification.

However, the examiner points out that the terms are essentially different in scope.

Programmatically does not necessarily suggest that functionality is performed

automatically. A program is a set of instructions for a computer to follow and perform

some process based on the instructions.   Any user-written/designated program that a

computer can understand and therefore that leads to generate some result based on

the programmatic approach to problem solving can be considered to be

programmatically generated , therefore, programmatically generating a program does

not necessarily imply that the program is automatically generated/executed being

modified itself during its execution/generation.

-Further, it is unclear how the state diagram information is received and how/where

(any user interface?) it is created and sent to generate the corresponding graphical

program.

-In line 4, it is unclear whether the state diagram specifies only a plurality of states

without transitions between the states?

-In line 7, it is unclear how the graphical source code is programmatically generated based on the state diagram information.

Claim 8 recites the limitation "the specified one or more states" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Per claims 12-13, the claim recites, "for at least one state, the state diagram information specifies program code associated with the state." However, claim 1 recites specifying plurality of states. Therefore, it is unclear what the claim 12 limitation notes.

Per claim 23, it is unclear what first functionality it is referring in line 4.

Claim 31 recites the limitation "the specified one or more states" in line 4. There is insufficient antecedent basis for this limitation in the claim.

As per claims 3-7, 14-22, 24, 27, 28, 30, 31, 33-35, these claims are rejected for dependency on the above rejected parent claims.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1-34 are rejected under 35 U.S.C. 102(b) as being anticipated by MathWorks ("Stateflow for State Diagram Modeling User's Guide," version 4, 1997-2001).

Per claim 1:

MathWorks discloses:

-receiving the state diagram information, wherein the state diagram information

represents the state diagram and specifies a plurality of states ("Stateflow is used

together with Simulink ... Simulink supports development ... in a graphical block diagram

environment," page 1-3; "A Stateflow diagram is a graphical representation of a finite

state machine where states and transitions form the basic building blocks of the

system... Stateflow provides a block that you include in a Simulink model," page 2-2)

-programmatically generating the graphical program in response to the state

diagram information ("creating a Simulink model with a Stateflow block," page 1-6)

-wherein said programmatically generating comprises programmatically generating

graphical source code corresponding to the plurality of states, wherein the graphical

source code comprises a plurality of interconnected nodes which visually indicate

functionality of the graphical program ("A Simulink model can consist of combinations of

Simulink blocks, toolbox blocks, and Stateflow blocks," page 2-4; see the figure in page

2-7)

-wherein the graphical program is executable by a computer (The Simulink model and

Stateflow machine work seamlessly together. Running a simulation automatically

executes both the Simulink and Stateflow portions of the model," page 2-4) as claimed.

Per claims 3-6:

A state diagram is used to describe the behavior of a system and each diagram usually
represents objects of an individual class and identifies the different states of its objects
through the system. As an algorithm is any sequence of operations for performing a
specific task, the state diagram can represent any desired operations, any other non-
software system so that each state of operation can be specified, conceptualized,
visualized, and constructed in the diagram. Thus, a state diagram can represent
desired operation of a software program, a hardware device, algorithm, and test
sequence. Therefore, accordingly, MathWorks anticipate these claims.

Per claim 7:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

-said programmatically generating the graphical program creates the graphical program
without any user input specifying the graphical program during said creating (see the
figure in section Creating a Simulink Model, page 1-6) as claimed.

Per claim 8:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

- programmatically generating a block diagram including the graphical source code
corresponding to the specified one or more states ("creating a Simulink model with a
Stateflow block," page 1-6) as claimed.

Per claim 12:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

- for at least one state, the state diagram information specifies program code associated

with the state; wherein the programmatically generated graphical source code includes

the specified program code ("creating a Simulink model with a Stateflow block," page 1-

6) as claimed.

Per claim 13:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

- for at least one state, the state diagram information specifies program code associated

with the state; wherein the programmatically generated graphical source code is

operable to invoke the specified source code (see the figure in section Creating a

Simulink Model, page 1-6) as claimed.

Per claim 14:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

- the state diagram information further specifies one or more state transitions, wherein

each state transition specifies a transition from a first state to a second state; wherein

said programmatically generating further comprises programmatically generating

graphical source code corresponding to the specified state transitions (See the section

Creating a Stateflow diagram, 4 Create transitions, page 1-10 and 1-11) as claimed.

Per claim 15:

The rejection of claim 14 is incorporated, and further, MathWorks teaches:

-the programmatically generated graphical source code includes placeholder graphical

source code for each state transition (see the figure in section Creating a Simulink

Model; "You can either start with the default empty model or copy the untitled Stateflow

block into any S, page 1-6) as claimed.

Per claim 16:

The rejection of claim 15 is incorporated, and further, MathWorks teaches:

-for one or more state transitions, a user manually entering graphical source code

specifying a Boolean condition associated with the state transition (section Transitions

in page 7-14-7-26) as claimed.

Per claim 17:

The rejection of claim 14 is incorporated, and further, MathWorks teaches:

-wherein the state diagram information specifies at least two state transitions from a

particular state; wherein the state diagram information also specifies a priority ordering

for the at least two state transitions; wherein said programmatically generating

comprises programmatically generating graphical source code such that, during

execution of the graphical program, Boolean conditions associated with the at least two

state transitions are evaluated in the specified priority ordering (section Transitions in

page 7-14-7-26) as claimed.

Per claim 18:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

- the state diagram information further specifies an initially active state; wherein said

programmatically generating comprises programmatically generating graphical source

code such that the graphical program begins execution in the initially active state (see

section Creating and Changing States, page 3-15-3-21) as claimed.

Per claim 19:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

- the state diagram information further specifies one or more stop states; wherein said

programmatically generating comprises programmatically generating graphical source

code such that if during execution of the graphical program one of the stop states

becomes active, then the graphical program is caused to stop execution (see section

Creating and Changing States, page 3-15-3-21) as claimed.

Per claim 20:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

- receiving information specifying a change to the state diagram information;

programmatically updating the graphical program to reflect the specified change (see

section Creating and Changing States, page 3-15-3-21; Inputting Events from Simulink,

page 5-16) as claimed.

Per claim 21:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

-calling an application programming interface (API) enabling the programmatic

generation of a graphical program (see API properties and methods in Appendices A-C)

as claimed.

Per claim 22:

The rejection of claim 1 is incorporated, and further, MathWorks teaches:

-programmatically requesting a server program to generate the graphical program (see

API properties and methods in Appendices A-C) as claimed.

   Per claims 23 and 24, they are another method versions of claims 1 and 7,

respectively, and are rejected for the same reasons set forth in connection with the

rejection of claims 1 and 7 above.

   Per claim 25, this claim is another version of the claimed method discussed in

claim 20, wherein all claim limitations also have been addressed and/or covered in cited

areas as set forth the above.

   Per claims 26-28, they are the system versions of claims 1, 7, and 8,

respectively, and are rejected for the same reasons set forth in connection with the

rejection of claims 1, 7, and 8 above.

   Per claims 29-31, they are the memory medium versions of claims 1, 7, and 8,

respectively, and are rejected for the same reasons set forth in connection with the

rejection of claims 1, 7, and 8 above.

Per claims 32-34, these claims are another versions of the claimed method

discussed in claims 1, 16, and 18, wherein all claim limitations also have been

addressed and/or covered in cited areas as set forth the above.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over

MathWorks ("Stateflow for State Diagram Modeling User's Guide," version 4, 1997-

2001) in view of Kodosky et al. (US 5,732,277).

Per claim 35, MathWorks does not explicitly teach that the placeholder graphical

source code for each state comprises a case in a graphical case structure. However,

Kodosky et al. disclose that the placeholder graphical source code for each state

comprises a case in a graphical case structure (col 20, lines 30-49;col 11, lines 43-60,

col 11, lines 44-60) so that it is easy for a user to cycle through the alternatives of each

case. Therefore, It would have been obvious to one having ordinary skill in the art at

the time of the invention was made to incorporate the teaching of Kodosky et al. to the

system of MathWorks. The modification would have been obvious because one having

ordinary skill in the art would have been motivated to include a case structure so that a

menu list of alternatives on the screen for a user to choose from is available.

Response to Arguments

10.   Applicant's arguments with respect to claims 1, 3-8, and 12-35, have been considered but are moot in view of the new ground(s) of rejection.

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-F 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I. Kang
Patent Examiner
11/12/2004

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100